

New York & Vermont Corn Silage Hybrid Trials - 2017

Data Tables

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This document is a preliminary report of the 2017 NYS & VT Corn Silage Trials. This will be followed by a full report of the 2017 trials including predicted milk yields generated by the Cornell Net Carbohydrate and Protein System (CNCPS) model.

Background

In 2017, companies were invited to enter hybrids into the New York & Vermont Corn Silage Hybrid Testing Program.

Seventy two corn silage hybrids were tested, each hybrid was planted at three locations. Each hybrid was planted in 3 replicates per location.

80 - 95 day Relative Maturity Hybrids (23 Hybrids)

Albion, NY (Orleans Co.)
Willsboro, NY (Essex Co.)
Alburgh, VT (Grand Isles Co.)

96-110 day Relative Maturity Hybrids (49 Hybrids)

Aurora, NY (Cayuga Co.)
Madrid, NY (St. Lawrence Co.).
Alburgh, VT (Grand Isles Co.)

All hybrids were planted at 34,000 plants/acre. Each plot consisted of two 20' rows spaced 30 inches apart.

Plots were 4 rows wide, at harvest the inner 2 rows were harvested. Target whole plant dry matter (DM) at harvest was 35% DM. Forage samples were sent to Cumberland Valley Analytical Laboratory for analysis.

2017 NY & VT Corn Silage Trial Location Information

	80 - 95 Day Relative Maturity			96-110 Day Relative Maturity		
	Alburgh, VT	Albion, NY	Willsboro, NY	Alburgh, VT	Aurora, NY	Madrid, NY
Planting Date	18-May	17-May	21-May	17-May	25-May	18-May
Harvest Date	20-Sep	12-Sep	26-Sep	28-Sep	20-Sep	28-Sep
Previous Crop	Corn	<i>missing</i>	Fallow	Corn	Winter Wheat	Corn
Soil Type	Covington Silty Clay Loam	Hilton Loam	Stafford Fine Sandy Loam	Covington Silty Clay Loam	Honeoye Silt Loam	Stockholm Loamy Fine Sand

Table 1a: NY & VT Corn Silage Trails, 80-95 RM, Weather Data, 2017 Growing Season

	Rainfall, inches			Growing Degree Days (GDD), 86/50 F		
	Alburgh, VT	Albion, NY	Willsboro, NY	Alburgh, VT	Albion, NY	Willsboro, NY
May	3.81	6.46	4.10	243	244	251
June	7.02	2.64	8.23	435	498	471
July	5.38	5.26	2.99	544	622	595
August	4.74	3.26	2.14	522	573	574
September	1.92	1.55	2.34	428	459	450
May-August	20.95	17.62	17.46	1743	1936	1890
May-September	22.87	19.17	19.80	2171	2395	2339
Average 2005-2017						
May-August	18.26	13.74	15.77	1971	2031	2025
May-September	22.30	16.90	18.77	2355	2443	2434

Table 1b: NY & VT Corn Silage Trails, 96-110 RM, Weather Data, 2017 Growing Season

	Rainfall, inches			Growing Degree Days (GDD), 86/50 F		
	Alburgh, VT	Aurora, NY	Madrid, NY	Alburgh, VT	Aurora, NY	Madrid, NY
May	3.81	4.54	6.88	243	253	249
June	7.02	4.14	5.84	435	467	453
July	5.38	6.99	6.76	544	595	555
August	4.74	1.56	3.81	522	529	514
September	1.92	2.29	2.05	428	424	407
May-August	20.95	17.23	23.29	1743	1843	1771
May-September	22.87	19.52	25.34	2171	2267	2177
Average 2005-2017						
May-August	18.26	14.28	16.97	1971	2071	1939
May-September	22.30	17.84	20.87	2355	2483	2320

Plot Means: 2017 NYS & VT Corn Silage Hybrid Trials

	Yield, 35% DM tons/acre	Dry Matter %	Starch % DM	Crude Protein % DM	Lignin % DM	aNDFom % DM	30 hr NDFDom % NDF	240 hr uNDFom % NDF
80-95 day RM								
Albion, NY	25.2	30.8	32.3	8.3	2.9	37.2	59.1	27.0
Willsboro, NY	19.6	31.3	38.1	7.7	3.1	39.5	56.3	30.5
Alburg, VT	27.5	31.8	34.4	7.5	3.3	38.9	53.2	34.3
96-110 day RM								
Aurora, NY	26.0	31.9	31.2	6.1	3.4	42.6	54.5	33.5
Madrid, NY	31.9	35.2	34.8	7.4	3.7	41.3	50.6	38.1
Alburg, VT	28.5	32.7	35.3	7.2	3.3	39.8	52.7	35.7
2016 Plot Means								
Aurora, NY	17.7	32.8	33.9	9.2	2.8	35.7	66.1	23.1
Madrid, NY	28.4	33.4	36.0	8.4	3.1	36.4	57.4	31.1

Company/Brand	Hybrid	Traits	Relative Maturity	Dry Matter	Yield, 35% DM	Starch	Starch Digestibility	Crude Protein	Lignin	Ash	Total Fatty Acids	aNDFom	NDF	Wet Chem 30 hr NDFD	30 hr NDFD	120 hr NDFD	240 hr NDFD	240 hr uNDF	RFC - Fill Ratio ¹	Harvest Population
				%	tons/ac	% DM	7 hr, 4mm	% DM	% DM	% DM	% DM	% DM	% DM	% NDF	%NDF	%NDF	%NDF	%NDF		plants/ac
Doebler's PA Hybrids, Inc.	RPM2918AM ³	HX1/YGCB/LL/RR2	89	34.4	26.4	37.1	62.2	8.2	2.6	3.0	2.7	33.6	34.1	57.2	58.5	70.1	72.3	27.7	4.0	28417
Masters Choice	MCT3891	Agrisure GT	88	33.5	24.4	34.8	59.9	8.0	2.9	3.0	2.6	37.9	38.5		58.1	69.6	71.8	28.2	3.6	30167
King Fisher	KF 35C10 ³	Conventional	85	32.3	23.2	35.8	60.9	8.8	2.7	2.9	2.5	34.1	34.8		59.1	70.8	73.0	27.0	4.0	27250
Hubner	H4046RC2P	GENVT2P RIB	88	31.5	22.6	33.9	59.9	7.9	2.9	3.0	2.6	37.5	38.1	57.2	58.9	70.6	72.8	27.2	3.6	30083
Dekalb	DKC36-28RIB	GENSS RIB	86	31.3	23.6	36.5	61.4	8.2	2.7	3.2	2.6	34.7	35.2		58.5	70.0	72.2	27.8	3.9	31417
Growmark FS	40R27SS	GENSS RIB	90	31.1	24.1	34.4	63.0	8.0	2.9	3.0	2.4	36.8	37.4		57.4	68.8	70.9	29.1	3.5	31250
Dekalb	DKC41-99RIB	GENVT2P RIB	91	30.3	24.5	32.4	62.1	8.3	2.7	3.4	2.3	36.6	37.4		59.7	71.5	73.7	26.3	3.6	32833
Schlessman Hybrids	916RR	RR	91	29.8	26.0	27.4	63.1	8.0	3.0	3.1	2.2	40.6	41.4	61.2	60.3	72.3	74.5	25.5	3.2	32333
Seedway	SW3654RR	RR	91	29.7	26.0	28.2	62.8	8.6	3.0	3.2	2.1	40.4	41.2		59.2	70.9	73.1	26.9	3.2	32333
NK	NK8920-3010 ³	Agrisure 3010	89	29.6	22.7	29.1	60.7	8.8	3.1	3.3	2.3	38.9	39.6		57.3	68.5	70.6	29.4	3.1	26667
85-91 day RM Mean				31.4	24.4	33.0	61.6	8.3	2.8	3.1	2.4	37.1	37.8	58.5	58.7	70.3	72.5	27.5	3.6	30275
Dyna-Gro/CPS	D34VC54	GENVT2P	94	32.0	26.3	35.1	64.3	7.6	2.9	3.0	2.4	37.1	37.7		57.9	69.3	71.5	28.5	3.6	31625
Seedway	SW3768GenSS	GENSS RIB	95	31.6	25.2	31.4	62.7	8.3	2.8	2.9	2.2	37.9	38.5		59.0	70.7	72.9	27.1	3.4	31833
Doebler's PA Hybrids, Inc.	RPM3618AMXT	RW/HXX/YGCB/LL/RR2	96	31.5	27.5	32.1	60.0	8.4	2.8	3.2	2.4	36.7	37.3	60.4	60.0	71.8	74.1	25.9	3.7	33083
Growmark FS	46R77SS	GENSS RIB	95	31.4	23.0	32.4	62.2	8.3	2.7	3.0	2.2	36.8	37.5		59.0	70.7	72.9	27.1	3.6	29000
Dekalb	DKC43-48RIB	GENVT3P RIB	93	31.3	28.4	31.6	64.2	7.7	3.0	3.1	2.2	38.4	39.1		57.3	68.6	70.7	29.3	3.3	33833
Seedway	SW3600GenSS	GENSS RIB	93	30.8	25.5	34.4	62.3	8.4	2.7	3.1	2.5	35.7	36.4		59.1	70.7	72.9	27.1	3.8	31542
NK	NK9535-3110	Agrisure Viptera 3110	95	30.6	27.3	34.0	62.7	8.0	3.0	2.9	2.3	35.8	36.4		55.3	66.2	68.2	31.8	3.3	30500
NK	NK9227-3110A	Agrisure Viptera 3110A	92	29.6	25.9	31.2	60.5	8.6	3.1	3.1	2.3	37.3	38.0		55.4	66.4	68.5	31.5	3.1	31917
Dekalb	DKC45-07RIB	GENSS RIB	95	29.6	25.1	29.2	63.1	8.3	2.9	3.5	2.1	40.0	40.7		59.1	70.8	73.0	27.0	3.2	36000
Wolf River Valley Seeds	2693RR	RR	93	29.2	26.1	30.7	64.6	8.0	2.9	3.3	2.3	37.5	38.4		58.3	69.9	72.0	28.0	3.4	33625
Masters Choice	MCT4572	Agrisure Viptera 3110	95	29.0	27.2	33.5	59.3	9.2	2.7	3.1	2.4	34.3	34.9		58.4	69.9	72.0	28.0	3.7	32167
Augusta Seed Corporation	2843	Agrisure Viptera 3110	93	29.0	26.6	28.7	59.6	8.9	3.1	3.2	2.3	39.1	39.6	56.9	57.0	68.3	70.4	29.6	3.0	30167
King Fisher	KF 43C40	Conventional	93	28.8	22.9	28.8	60.6	9.1	3.0	3.3	2.2	37.6	38.5		57.0	68.2	70.3	29.7	3.1	27500
92-96 day RM Mean				30.3	25.9	31.8	62.0	8.4	2.9	3.1	2.3	37.3	37.9	58.7	57.9	69.4	71.5	28.5	3.4	31753
LSD (0.10)				1.6	NS ²	4.5	1.8	0.5	NS	NS	0.3	3.6	3.6	1.9	1.7	2.1	2.1	2.1	0.6	3751
OverallMean				30.8	25.2	32.3	61.8	8.3	2.9	3.1	2.4	37.2	37.9	58.6	58.3	69.8	71.9	28.1	3.5	31111

* All nutrient parameters analyzed by NIR methods, except where indicated. Select companies opted to receive wet chemistry information for an additional fee.

** Tables are sorted by descending dry matter for comparison purposes

*** NDF = neutral detergent fiber, aNDFom = ash corrected neutral detergent fiber, NDFD = neutral detergent fiber digestibility, uNDF = undigested neutral detergent fiber

¹ - RFC-Fill Ratio = Rumen Fermentable Carbohydrate - Fill Ratio, defined as ((NDFd30 + starch)/uNDF30). Jones, L.R., and J. Siciliano-Jones. 2015. Index useful for ranking silage samples. Feedstuffs 17, 19.

² - NS = Not Significant

³ - One plot replicate had a harvest population count < 25,000

⁴ - Yield and harvest population data removed due to 2 plot replicates having a harvest population count < 25,000

Company/Brand	Hybrid	Traits	Relative Maturity	Dry Matter	Yield, 35% DM	Starch	Starch Digestibility	Crude Protein	Lignin	Ash	Total Fatty Acids	aNDFom	NDF	Wet Chem 30 hr NDFD	30 hr NDFD	120 hr NDFD	240 hr NDFD	240 hr uNDF	RFC - Fill Ratio ¹	Harvest Population
				%	tons/ac	% DM	7 hr, 4mm	% DM	% DM	% DM	% DM	% DM	% DM	% NDF	%NDF	%NDF	%NDF	%NDF		plants/ac
Doebler's PA Hybrids, Inc.	RPM2918AM	HX1/YGCB/LL/RR2	89	37.4	19.8	41.3	61.1	7.7	2.9	2.7	2.8	36.6	37.1	53.6	55.6	66.6	68.6	31.4	3.8	28500
Dekalb	DKC41-99RIB	GENVT2P RIB	91	33.4	19.2	38.5	62.3	7.2	3.2	3.1	2.6	40.5	41.1		55.4	66.3	68.3	31.7	3.4	26167
Masters Choice	MCT3891 ⁴	Agrisure GT	88	32.5	—	39.1	60.7	7.5	3.1	3.1	2.7	39.2	39.8		55.8	66.9	68.9	31.1	3.5	—
Dekalb	DKC36-28RIB ⁴	GENSS RIB	86	32.0	—	42.6	60.3	8.0	2.8	3.6	2.9	35.4	35.9		55.9	66.9	69.0	31.0	4.0	—
Schlessman Hybrids	916RR	RR	91	31.5	20.6	36.4	64.5	7.5	3.0	2.9	2.6	39.9	40.6	54.5	58.8	70.4	72.6	27.4	3.6	29333
King Fisher	KF 35C10	Conventional	85	31.4	14.9	38.3	61.8	8.0	3.1	3.1	2.5	40.0	40.6		56.2	67.3	69.4	30.6	3.4	28667
Growmark FS	40R27S5 ³	GENSS RIB	90	31.0	18.8	39.9	62.2	7.6	3.1	3.3	2.7	39.0	39.6		55.0	65.8	67.9	32.1	3.5	28500
Hubner	H4046RC2P	GENVT2P RIB	88	30.6	17.0	40.6	62.5	7.4	3.0	3.2	2.7	37.8	38.4	55.4	56.5	67.7	69.8	30.2	3.7	31333
NK	NK8920-3010	Agrisure 3010	89	30.6	20.4	36.0	60.1	7.9	3.3	3.0	2.6	42.4	43.1		56.0	67.0	69.1	30.9	3.2	29167
Seedway	SW3654RR ³	RR	91	27.8	19.4	31.5	63.6	8.3	3.5	3.8	2.4	43.2	43.9		55.4	66.4	68.4	31.6	2.9	26167
		85-91 day RM Mean		31.8	18.8	38.4	61.9	7.7	3.1	3.2	2.6	39.4	40.0	54.5	56.1	67.1	69.2	30.8	3.5	28479
Dyna-Gro/CPS	D34VC54	GENVT2P	94	33.1	19.6	38.5	61.4	7.2	3.1	3.2	2.7	39.1	39.7		55.0	66.0	68.0	32.0	3.4	31000
Seedway	SW3768GenSS	GENSS RIB	95	32.2	19.0	40.9	62.6	7.6	3.0	3.0	2.6	38.1	38.7		56.2	67.3	69.4	30.6	3.7	28833
Wolf River Valley Seeds	2693RR	RR	93	32.1	21.7	40.7	63.0	7.2	3.0	3.2	2.9	37.8	38.4		55.5	66.5	68.5	31.5	3.6	32167
Growmark FS	46R77S5 ⁴	GENSS RIB	95	31.8	—	38.3	63.1	7.7	3.1	3.2	2.8	39.0	39.6		56.2	67.3	69.4	30.6	3.5	—
Dekalb	DKC43-48RIB	GENVT3P RIB	93	31.6	22.1	38.1	64.6	7.4	3.3	3.3	2.6	39.4	40.0		54.8	65.6	67.6	32.4	3.3	31500
Seedway	SW3600GenSS	GENSS RIB	93	31.0	19.5	37.9	63.3	7.4	3.2	3.4	2.4	40.3	40.9		55.3	66.2	68.3	31.7	3.3	30667
Dekalb	DKC45-07RIB	GENSS RIB	95	30.8	18.4	36.3	61.8	7.8	3.2	3.5	2.5	41.4	42.0		56.6	67.7	69.8	30.2	3.3	32000
NK	NK9535-3110	Agrisure Viptera 3110	95	30.7	20.8	38.1	63.9	7.5	3.2	3.2	2.7	38.4	39.0		53.5	64.1	66.1	33.9	3.3	30333
Doebler's PA Hybrids, Inc.	RPM3618AMXT	RW/HXX/YGCB/LL/RR2	96	30.6	19.1	39.4	61.8	7.7	2.9	3.0	2.6	38.8	39.4	54.3	57.9	69.3	71.5	28.5	3.8	31000
Masters Choice	MCT4572	Agrisure Viptera 3110	95	30.5	23.4	38.3	60.1	8.0	3.1	2.9	2.8	38.6	39.2		55.4	66.4	68.4	31.6	3.4	32167
Augusta Seed Corporation	2843 ³	Agrisure Viptera 3110	93	29.7	20.0	37.6	60.7	7.5	3.2	2.9	2.6	40.5	41.1	56.5	55.1	66.1	68.1	31.9	3.3	26333
NK	NK9227-3110A	Agrisure Viptera 3110A	92	28.6	19.2	33.9	62.4	8.0	3.3	3.3	2.5	41.1	41.7		54.3	65.0	67.1	32.9	3.0	30833
King Fisher	KF 43C40 ⁴	Conventional	93	28.3	—	33.0	60.8	8.8	3.3	3.4	2.6	41.4	42.1		56.0	67.0	69.1	30.9	3.1	—
		92-96 day RM Mean		30.8	20.3	37.8	62.3	7.7	3.2	3.2	2.6	39.5	40.1	55.4	55.5	66.5	68.6	31.4	3.4	30621
		LSD (0.10)		1.7	3.4	4.4	NS²	0.5	0.2	0.4	0.2	3.3	NS	NS	2.1	NS	NS	NS	0.4	3698
		Overall Mean		31.3	19.6	38.1	62.1	7.7	3.1	3.2	2.6	39.5	40.1	54.9	55.8	66.8	68.8	31.2	3.4	29719

* All nutrient parameters analyzed by NIR methods, except where indicated. Select companies opted to receive wet chemistry information for an additional fee.

** Tables are sorted by descending dry matter for comparison purposes

*** NDF = neutral detergent fiber, aNDFom = ash corrected neutral detergent fiber, NDFD = neutral detergent fiber digestibility, uNDF = undigested neutral detergent fiber

¹ - RFC-Fill Ratio = Rumen Fermentable Carbohydrate - Fill Ratio, defined as ((NDFd30 + starch)/uNDF30). Jones, L.R., and J. Siciliano-Jones. 2015. Index useful for ranking silage samples. Feedstuffs 17, 19.

² - NS = Not Significant

³ - One plot replicate had a harvest population count < 25,000

⁴ - Yield and harvest population data removed due to 2 plot replicates having a harvest population count < 25,000

**** The Willsboro location experience some variability in plant population that should be noted when comparing hybrid performance

Company/Brand	Hybrid	Traits	Relative Maturity	Dry Matter	Yield, 35% DM	Starch	Starch Digestibility	Crude Protein	Lignin	Ash	Total Fatty Acids	aNDFom	NDF	Wet Chem 30 hr NDFD	30 hr NDFD	120 hr NDFD	240 hr NDFD	240 hr uNDF	RFC - Fill Ratio ¹	Harvest Population
				%	tons/ac	% DM	7 hr, 4mm	% DM	% DM	% DM	% DM	% DM	% DM	% NDF	%NDF	%NDF	%NDF	%NDF		plants/ac
Masters Choice	MCT3891	Agrisure GT	88	35.2	31.5	35.9	65.7	7.2	3.4	3.8	2.4	39.1	39.8		51.5	62.2	64.5	35.5	2.9	32555
Doebler's PA Hybrids, Inc.	RPM2918AM	HX1/YGCB/LL/RR2	89	33.1	28.1	36.4	68.5	7.2	3.4	4.2	2.6	37.7	38.3	53.8	50.2	61.4	63.7	36.3	2.9	33167
Dekalb	DKC36-28RIB	GENSS RIB	86	33.0	25.2	36.5	66.4	7.9	3.2	4.3	2.5	37.4	37.9		53.5	63.3	65.6	34.4	3.2	33167
Dekalb	DKC41-99RIB	GENVT2P RIB	91	32.8	24.4	35.3	69.7	7.0	3.4	4.1	2.4	39.4	40.0		52.5	62.5	64.7	35.3	3.0	32861
Hubner	H4046RC2P	GENVT2P RIB	88	32.6	27.8	35.2	69.1	7.3	3.3	4.0	2.4	39.2	39.8	55.9	53.2	63.4	65.4	34.6	3.1	34389
King Fisher	KF 35C10	Conventional	85	31.9	24.7	36.1	68.3	7.4	3.2	3.7	2.3	38.1	38.7		52.7	63.1	65.4	34.7	3.1	33931
NK	NK8920-3010	Agrisure 3010	89	31.7	31.9	34.1	67.0	7.7	3.4	3.7	2.5	39.0	39.6		51.5	61.6	63.5	36.5	2.9	33625
Growmark FS	40R27SS	GENSS RIB	90	31.7	24.8	33.6	69.8	7.3	3.4	4.1	2.3	40.0	40.7		51.9	62.8	65.7	34.3	2.8	33472
Schlessman Hybrids	916RR	RR	91	30.7	28.6	33.1	69.8	7.6	3.2	4.2	2.4	38.6	39.2	55.8	54.2	62.7	65.0	35.0	3.0	33167
Seedway	SW3654RR	RR	91	30.5	28.3	30.8	71.1	7.6	3.5	4.0	2.2	41.9	42.6		53.2	63.9	65.9	34.1	2.7	32708
85-91 day RM Mean				32.3	27.5	34.7	68.5	7.4	3.4	4.0	2.4	39.1	39.7	55.2	52.4	62.7	64.9	35.1	3.0	33304
Dyna-Gro/CPS	D34VC54	GENVT2P	94	32.8	28.7	34.6	71.0	7.4	3.2	4.0	2.3	38.0	38.6		53.9	63.7	66.0	34.1	3.1	34084
Growmark FS	46R77SS	GENSS RIB	95	32.6	27.1	37.0	70.2	7.4	3.1	3.7	2.5	37.5	38.1		54.3	63.5	65.9	34.1	3.3	34848
NK	NK9535-3110	Agrisure Viptera 3110	95	32.3	34.9	36.3	68.7	7.5	3.2	3.9	2.4	36.3	36.8		51.8	61.0	63.0	37.0	3.1	32555
Seedway	SW3768GenSS	GENSS RIB	95	32.0	27.0	34.6	68.8	7.7	3.4	4.4	2.4	39.6	40.2		52.3	63.6	66.5	33.5	2.9	32097
Dekalb	DKC45-07RIB	GENSS RIB	95	31.7	27.7	32.9	68.9	7.8	3.2	4.3	2.3	39.3	39.9		55.8	65.3	68.0	32.0	3.1	33625
Wolf River Valley Seeds	2693RR	RR	93	31.5	24.1	32.8	70.7	7.2	3.2	4.0	2.3	39.3	39.9		55.4	65.2	67.9	32.1	3.1	35001
NK	NK9227-3110A	Agrisure Viptera 3110A	92	31.2	29.0	35.4	66.4	7.7	3.3	3.7	2.4	36.2	36.8		51.0	59.6	61.6	38.4	3.0	33625
Dekalb	DKC43-48RIB	GENVT3P RIB	93	31.2	26.9	32.9	70.5	7.1	3.6	4.2	2.3	41.5	42.2		50.9	62.2	64.2	35.8	2.6	35307
Seedway	SW3600GenSS	GENSS RIB	93	31.2	26.1	34.2	67.9	7.4	3.3	4.3	2.3	38.8	39.4		52.3	62.8	65.0	35.0	2.9	34848
Masters Choice	MCT4572	Agrisure Viptera 3110	95	30.5	29.1	34.6	66.6	7.8	3.3	3.8	2.4	37.0	37.6		51.5	60.8	63.0	37.0	3.0	33472
Doebler's PA Hybrids, Inc.	RPM3618AMXT	RW/HXX/YGCB/LL/RR2	96	30.5	26.3	33.1	67.3	7.4	3.3	4.2	2.3	40.3	40.9	53.9	53.8	64.1	66.4	33.6	2.9	33320
King Fisher	KF 43C40	Conventional	93	30.5	24.6	32.5	67.9	7.4	3.6	4.0	2.4	41.3	41.9		50.5	62.1	64.5	35.5	2.6	31485
Augusta Seed Corporation	2843	Agrisure Viptera 3110	93	30.0	26.3	32.2	67.0	8.0	3.3	4.0	2.3	38.7	39.3	52.8	52.4	62.2	64.5	35.5	2.8	29957
92-96 day RM Mean				31.4	27.5	34.1	68.6	7.5	3.3	4.0	2.4	38.8	39.4	53.4	52.8	62.8	65.1	34.9	3.0	33402
LSD (0.10)				1.8	4.1	NS²	2.3	NS	NS	0.3	NS	NS	3.3	NS	2.8	2.3	2.5	2.5	NS	NS
OverallMean				31.8	27.5	34.4	68.6	7.5	3.3	4.0	2.4	38.9	39.5	54.4	52.6	62.7	65.0	35.0	3.0	33359

* All nutrient parameters analyzed by NIR methods, except where indicated. Select companies opted to receive wet chemistry information for an additional fee.

** Tables are sorted by descending dry matter for comparison purposes

*** NDF = neutral detergent fiber, aNDFom = ash corrected neutral detergent fiber, NDFD = neutral detergent fiber digestibility, uNDF = undigested neutral detergent fiber

¹ - RFC-Fill Ratio = Rumen Fermentable Carbohydrate - Fill Ratio, defined as ((NDFd30 + starch)/uNDF30). Jones, L.R., and J. Siciliano-Jones. 2015. Index useful for ranking silage samples. Feedstuffs 17, 19.

² - NS = Not Significant

³ - One plot replicate had a harvest population count < 25,000

⁴ - Yield and harvest population data removed due to 2 plot replicates having a harvest population count < 25,000

Company/Brand	Hybrid	Traits	Relative Maturity	Dry Matter	Yield, 35% DM	Starch	Starch Digestibility	Crude Protein	Lignin	Ash	Total Fatty Acids	aNDFom	NDF	Wet Chem 30 hr NDFD	30 hr NDFD	120 hr NDFD	240 hr NDFD	240 hr uNDF	RFC - Fill Ratio ¹	Harvest Population
				%	tons/ac	% DM	7 hr, 4mm	% DM	% DM	% DM	% DM	% DM	% DM	% NDF	%NDF	%NDF	%NDF	%NDF		plants/ac
Dekalb	DKC48-57RIB	GENVT2P RIB	98	37.0	26.8	36.0	60.5	5.6	3.3	2.3	2.5	41.3	42.0		53.6	63.2	65.1	34.9	3.0	35167
Hubner	H6124RCSS	GENSS RIB	96	35.8	27.9	38.7	62.1	5.6	3.3	2.4	2.5	39.3	39.9	54.3	51.8	61.1	63.1	36.9	3.2	35833
Pioneer	P9789AMXT	AMXT,LL,RR2	98	35.1	28.3	36.9	61.8	6.4	3.3	2.7	2.6	40.2	40.8		53.2	63.7	65.7	34.3	3.1	35500
King Fisher	KF 49C60	Conventional	99	35.0	25.7	35.0	59.2	6.6	3.0	2.8	2.4	41.1	41.7		58.4	68.8	71.3	28.7	3.5	29667
Doebler's PA Hybrids, Inc.	3916GRQ	Agrisure 3011A	99	34.6	25.6	35.9	63.0	5.8	3.4	2.6	2.4	40.5	41.1	54.7	51.1	59.9	62.0	38.0	2.9	34833
Channel	198-98STXRIB	GENSS RIB	98	34.2	27.9	32.3	62.2	5.8	3.6	2.8	2.3	42.5	43.2		51.7	59.4	61.5	38.6	2.6	34833
Mycogen Seeds	TMF2Q419	Smartstax Refuge Advanced	96	34.0	25.9	30.4	59.0	6.1	3.7	2.8	2.5	44.7	45.4	56.0	52.0	60.6	62.7	37.3	2.5	35167
Dekalb	DKC46-20RIB	GENVT3P RIB	96	33.3	29.4	32.6	61.1	6.5	3.5	3.1	2.3	42.6	43.3		53.4	63.6	65.5	34.5	2.8	35917
Mycogen Seeds	TMF99Q47	Smartstax Refuge Advanced	99	33.0	27.2	29.8	60.5	6.0	3.4	2.5	2.3	43.2	43.9	52.8	53.8	64.5	66.4	33.6	2.6	33500
Augusta Seed Corporation	3750	Agrisure Viptera 3111	100	32.7	25.0	32.4	58.0	5.8	3.4	2.6	2.4	43.2	43.9	54.1	52.6	61.3	63.3	36.7	2.7	34500
Masters Choice	MCT4632	Agrisure Viptera 3110	96	32.7	25.6	34.8	59.1	6.4	3.0	3.0	2.2	40.3	40.9		56.2	65.6	67.6	32.4	3.2	34250
Growmark FS	49R79SS	GENSS RIB, DAIRYSELECT	99	32.3	25.2	33.3	61.5	6.2	3.5	2.6	2.6	41.2	41.8		52.3	62.7	64.6	35.4	2.8	33000
Hubner	H6191RCSS	GENSS RIB	99	31.9	24.6	35.1	60.7	6.0	3.3	2.3	2.7	40.5	41.1	57.0	53.7	64.3	66.3	33.7	3.0	35000
Masters Choice	MCT4934	Agrisure Viptera 3111	99	31.9	25.7	32.1	62.1	6.4	3.4	2.8	2.2	41.6	42.2		52.2	60.7	63.0	37.1	2.7	34667
Channel	199-72STXRIB	GENSS RIB	99	31.5	26.6	33.9	61.6	5.9	3.4	2.6	2.6	40.6	41.2		52.5	62.5	64.4	35.6	2.9	35000
Hubner	H6157RCSS	GENSS RIB	94	31.3	26.7	32.6	62.6	6.4	3.5	2.8	2.4	41.9	42.5	52.9	52.2	60.8	63.0	37.0	2.7	35667
Augusta Seed Corporation	2847	Agrisure Viptera 3110	97	30.5	24.0	32.7	59.4	6.5	3.6	3.0	2.5	41.9	42.6	55.4	52.1	61.5	63.4	36.6	2.7	33333
Mycogen	BMR97B37	Smartstax	97	28.3	26.1	32.5	59.0	6.4	2.5	2.5	2.5	40.5	41.1	65.7	66.1	79.2	81.6	18.4	4.3	33167
94-100 day RM Mean				33.1	26.3	33.7	60.7	6.1	3.3	2.7	2.4	41.5	42.1	55.9	53.8	63.5	65.6	34.4	3.0	34389
NK	NK0199	Agrisure 3011A	101	34.4	26.1	35.4	59.4	6.7	3.2	2.3	2.4	39.9	40.5		54.2	63.9	65.9	34.1	3.1	33167
Dekalb	DKC54-40RIB	GENVT2P RIB	104	33.7	29.3	36.6	62.7	6.1	3.3	2.6	2.6	39.2	39.8		52.6	61.4	63.4	36.6	3.1	36000
Doebler's PA Hybrids, Inc.	RPM4115AMXT	RW/HXX/YGCB/LL/RR2	101	33.6	28.5	33.3	61.7	5.8	3.5	2.5	2.4	43.1	43.7	58.6	54.2	64.9	66.9	33.1	2.9	34333
Channel	202-20STXRIB	GENSS RIB	102	33.4	30.4	32.5	62.7	6.4	3.6	3.0	2.3	40.9	41.5		50.5	60.2	62.0	38.0	2.6	35167
Dekalb	DKC55-21RIB	GENVT2P RIB	105	33.1	28.0	33.4	63.7	6.3	3.5	2.6	2.4	42.0	42.6		52.7	62.2	64.1	35.9	2.8	35333
Dekalb	DKC52-30RIB	GENSS RIB	102	32.8	25.5	28.8	64.0	5.9	3.4	2.9	2.0	43.7	44.3		54.9	64.8	66.8	33.2	2.7	36833
Masters Choice	MCT5371	Agrisure GT	103	32.7	23.6	30.2	62.1	5.9	3.2	2.6	2.2	42.2	42.9		55.9	65.8	67.9	32.1	2.9	30333
Doebler's PA Hybrids, Inc.	RPM4318AMXT	RW/HXX/YGCB/LL/RR2	103	32.2	24.9	31.1	61.3	5.8	3.6	2.8	2.1	43.3	43.9	55.1	51.7	62.1	64.2	35.8	2.6	30500
Hubner	H6225RCSS	GENSS RIB	102	31.5	24.9	31.6	62.9	5.7	3.7	2.7	2.3	45.6	46.3	55.8	52.4	61.5	63.4	36.6	2.6	36000
Growmark FS	53R41SS	GENSS RIB, DAIRYSELECT	103	31.4	24.6	30.9	63.9	6.9	3.7	2.8	2.3	43.2	43.9		51.5	60.7	62.6	37.4	2.5	34500
NK	NK0142	Agrisure 3122 E-Z Refuge	101	31.3	25.9	30.7	60.1	6.1	3.7	2.5	2.3	43.8	44.5		50.5	59.3	61.6	38.5	2.4	38000
Hubner	H6257RCSS	GENSS RIB	104	31.2	24.3	30.3	61.3	5.4	3.3	2.7	2.3	43.0	43.7	55.6	54.6	65.4	67.4	32.6	2.7	35833
NK	NK0519	Agrisure 3122 E-Z Refuge	105	30.9	24.1	28.7	61.8	6.2	3.5	2.4	2.3	43.3	44.0		53.5	64.1	66.1	33.9	2.6	33500
Channel	203-01STXRIB	GENSS RIB	103	30.7	25.9	31.1	59.8	6.0	3.2	2.8	2.4	42.0	42.6		55.9	66.9	69.0	31.0	2.9	34667
Pioneer	P0242AMXT	AMXT,LL,RR2	104	30.5	25.1	30.8	61.3	6.6	3.2	2.8	2.1	41.8	42.4		55.9	66.9	69.0	31.0	2.9	35333
Seedway	SW5430GenSS	GENSS RIB	105	30.5	29.1	28.4	61.6	6.4	3.6	2.9	2.4	43.0	43.7		52.1	60.5	62.5	37.5	2.5	35500
Wolf River Valley Seeds	3805FLRR	Floury Leafy, RR	103	30.2	25.8	22.4	58.4	5.9	4.0	2.4	1.9	49.3	50.0	55.1	51.3	60.2	62.3	37.7	2.0	34333
King Fisher	KF 52C20 ³	Conventional	102	28.7	24.0	29.3	62.9	5.9	3.4	2.5	2.2	43.3	43.9		53.2	63.3	65.4	34.6	2.6	29000
101-105 day RM Mean				31.8	26.1	30.9	61.7	6.1	3.5	2.7	2.3	42.9	43.6	56.0	53.2	63.0	65.0	35.0	2.7	34352

Company/Brand	Hybrid	Traits	Relative Maturity	Dry Matter	Yield, 35% DM	Starch	Starch Digestibility	Crude Protein	Lignin	Ash	Total Fatty Acids	aNDFom	NDF	Wet Chem 30 hr NDFD	30 hr NDFD	120 hr NDFD	240 hr NDFD	240 hr uNDF	RFC - Fill Ratio ¹	Harvest Population
				%	tons/ac	% DM	7 hr, 4mm	% DM	% DM	% DM	% DM	% DM	% DM	% NDF	%NDF	%NDF	%NDF	%NDF		plants/ac
Dyna-Gro/CPS	D49VC39	GENVT2P	109	32.2	24.4	27.8	61.2	6.2	3.6	2.7	2.2	43.3	43.9		51.1	59.4	61.3	38.8	2.3	33667
Channel	207-27STXRIB	GENSS RIB	107	31.5	27.1	33.0	62.5	6.3	3.3	2.7	2.4	40.7	41.3		54.6	64.5	66.5	33.5	3.0	35667
Augusta Seed Corporation	4759	Agrisure Viptera 3110	109	31.4	25.9	28.5	60.4	6.1	3.3	2.4	2.1	43.7	44.4	55.5	55.7	66.7	68.7	31.3	2.7	34500
Channel	209-15STXRIB	GENSS RIB	109	31.2	27.3	27.9	58.5	6.3	3.2	2.8	2.3	42.5	43.1		56.1	67.1	69.2	30.8	2.8	33167
Dekalb	DKC57-77RIB	DG GENVT2 RIB	107	31.1	27.8	29.1	63.8	6.1	3.3	2.7	2.1	42.8	43.5		55.8	66.8	68.8	31.2	2.8	33833
Seedway	SW6630GenSS	GENSS RIB	110	30.4	27.1	28.6	57.6	5.9	3.4	2.2	2.4	43.5	44.1		53.5	63.8	65.7	34.3	2.6	35000
Pioneer	P0921AMXT	AMXT,LL,RR2	110	30.2	26.2	26.3	63.7	5.9	3.5	2.7	2.0	43.9	44.6		53.9	63.7	65.6	34.4	2.5	35833
Masters Choice	MCT5661	Agrisure GT	106	30.0	26.2	29.4	62.3	5.8	3.6	2.6	2.2	44.3	44.9		50.4	60.1	62.0	38.0	2.4	32667
Seedway	SW5559GTRW	Agrisure GT/RW	106	29.9	26.0	29.5	63.1	6.0	3.3	2.6	2.1	43.8	44.5		55.3	64.8	67.0	33.0	2.7	34667
Dairyland Seed	HiDF-3407RA	Smartstax Refuge Advanced	107	28.9	24.5	22.8	59.3	6.2	4.0	2.5	2.2	49.4	50.1	56.2	50.6	60.9	62.8	37.2	2.0	35667
Mycogen	BMR10B27	Smartstax Refuge Advanced	110	28.6	24.5	26.5	58.2	6.1	2.1	2.7	2.2	40.8	41.6	68.6	71.0	85.0	87.7	12.3	4.7	34500
King Fisher	KF 58C80 ³	Conventional	108	28.2	21.7	25.8	60.8	5.9	3.3	2.6	2.1	44.8	45.5		55.8	66.9	69.0	31.0	2.6	28000
Doebler's PA Hybrids, Inc.	RPM4717AMX	HXX/YGCB/LL/RR2	107	28.1	23.3	30.0	63.6	6.0	3.6	2.9	2.3	42.6	43.3	54.5	51.7	61.1	63.0	37.0	2.5	32500
106 -110day RM Mean				30.1	25.5	28.1	61.2	6.1	3.4	2.6	2.2	43.5	44.2	58.7	55.0	65.4	67.5	32.5	2.7	33821
LSD (0.10)				2.9	NS ²	4.9	2.9	NS	0.4	NS	0.3	3.8	3.9	3.3	3.4	4.8	4.9	4.9	0.5	3222
OverallMean				31.8	26.0	31.2	61.2	6.1	3.4	2.7	2.3	42.6	43.2	56.6	53.9	63.8	65.9	34.1	2.8	34224

* All nutrient parameters analyzed by NIR methods, except where indicated. Select companies opted to receive wet chemistry information for an additional fee.

** Tables are sorted by descending dry matter for comparison purposes

*** NDF = neutral detergent fiber, aNDFom = ash corrected neutral detergent fiber, NDFD = neutral detergent fiber digestibility, uNDF = undigested neutral detergent fiber

¹ - RFC-Fill Ratio = Rumen Fermentable Carbohydrate - Fill Ratio, defined as ((NDFd30 + starch)/uNDF30). Jones, L.R., and J. Siciliano-Jones. 2015. Index useful for ranking silage samples. Feedstuffs 17, 19.

² - NS = Not Significant

³ - One plot replicate had a harvest population count < 25,000

⁴ - Yield and harvest population data removed due to 2 plot replicates having a harvest population count < 25,000

Company/Brand	Hybrid	Traits	Relative Maturity	Dry Matter %	Yield, 35% DM tons/ac	Starch % DM	Starch Digestibility 7 hr, 4mm	Crude Protein % DM	Lignin % DM	Ash % DM	Total Fatty Acids % DM	aNDFom % DM	NDF % DM	Wet Chem 30 hr NDFD % NDF	30 hr NDFD % NDF	120 hr NDFD % NDF	240 hr NDFD % NDF	240 hr uNDF % NDF	RFC - Fill Ratio ¹	Harvest Population plants/ac
Dekalb	DKC48-57RIB	GENVT2P RIB	98	42.0	31.8	35.7	56.6	7.0	3.6	4.2	2.5	41.5	42.1		49.7	59.0	60.8	39.2	2.7	35333
King Fisher	KF 49C60	Conventional	99	40.9	32.7	43.5	56.5	6.9	3.1	4.0	2.7	35.7	36.3		51.6	60.6	62.5	37.5	3.6	35333
Augusta Seed Corporation	3750	Agrisure Viptera 3111	100	40.0	34.5	38.2	56.9	7.1	3.5	3.9	2.8	39.3	39.9	52.6	50.5	59.7	61.6	38.4	3.0	35167
Hubner	H6124RCSS	GENSS RIB	96	39.6	33.9	35.6	59.0	7.0	3.9	4.1	2.6	43.5	44.1	56.7	49.3	59.2	61.6	38.4	2.6	35833
Mycogen Seeds	TMF2Q419	Smartstax Refuge Advanced	96	39.2	33.2	36.7	58.6	7.4	3.4	4.0	2.7	40.6	41.2	55.4	51.5	60.8	62.6	37.4	3.1	35833
Pioneer	P9789AMXT	AMXT,LL,RR2	98	39.0	31.8	35.4	60.3	7.6	3.7	3.9	2.6	41.9	42.5		50.6	59.6	61.5	38.5	2.7	36000
Hubner	H6191RCSS	GENSS RIB	99	37.4	29.7	38.2	54.0	7.2	3.7	3.8	2.7	41.3	41.9	52.8	48.5	57.8	59.6	40.4	2.8	35833
Mycogen	F2F499	Smartstax Refuge Advanced	99	37.2	29.7	39.9	55.5	7.6	2.7	3.6	3.1	36.3	36.8	61.7	60.7	72.7	75.0	25.0	4.3	34500
Doebler's PA Hybrids, Inc.	3916GRQ	Agrisure 3011A	99	36.8	33.5	34.2	57.5	8.2	3.7	4.0	2.4	41.0	41.6	57.5	50.6	60.7	62.5	37.5	2.7	33167
Augusta Seed Corporation	2847	Agrisure Viptera 3110	97	36.8	30.6	33.5	54.7	7.8	4.1	4.5	2.6	43.9	44.6	52.4	48.0	57.7	59.5	40.5	2.4	34500
Growmark FS	49R79SS	GENSS RIB, DAIRYSELECT	99	36.8	30.1	36.3	59.4	8.0	3.7	4.1	2.7	39.7	40.3		48.2	57.5	59.4	40.6	2.8	35667
Hubner	H6157RCSS	GENSS RIB	94	36.5	30.5	38.0	60.2	7.4	3.6	4.3	2.7	40.1	40.7	53.9	50.0	59.1	61.0	39.0	3.0	34333
Masters Choice	MCT4632	Agrisure Viptera 3110	96	36.5	31.6	37.7	52.3	7.7	3.4	4.7	2.6	39.1	39.7		51.2	60.1	62.1	37.9	3.0	35500
Mycogen Seeds	TMF99Q47	Smartstax Refuge Advanced	99	36.3	30.3	34.4	58.7	7.4	3.6	3.7	2.8	41.1	41.7	51.0	50.7	60.7	62.6	37.4	2.7	35667
Channel	199-72STXRIB	GENSS RIB	99	36.2	34.2	36.2	60.0	7.4	3.4	4.0	2.7	39.3	39.9		52.9	62.6	64.6	35.4	3.1	34333
Dekalb	DKC46-20RIB	GENVT3P RIB	96	36.0	31.7	31.7	58.9	7.3	3.8	4.4	2.3	43.2	43.9		49.2	56.9	58.7	41.3	2.4	34500
Channel	198-98STXRIB	GENSS RIB	98	35.7	30.0	34.3	59.7	6.8	4.1	4.2	2.5	42.7	43.4		45.8	54.0	55.7	44.3	2.3	35000
Masters Choice	MCT4934	Agrisure Viptera 3111	99	35.1	32.5	33.9	58.6	7.4	4.0	4.3	2.5	41.7	42.4		45.5	53.3	55.2	44.8	2.3	35667
Mycogen	BMR97B37	Smartstax	97	33.9	30.1	35.1	59.7	7.6	3.2	3.8	2.8	40.3	40.9	59.9	59.1	70.8	73.0	27.0	3.6	34667
94-100 day RM Mean				37.5	31.7	36.2	57.7	7.4	3.6	4.1	2.6	40.6	41.3	55.4	50.7	60.1	62.1	37.9	2.9	35096
NK	NK0142	Agrisure 3122 E-Z Refuge	101	40.2	30.6	37.7	59.9	7.2	3.8	4.2	2.6	40.0	40.6		46.5	54.3	56.5	43.5	2.6	35833
Growmark FS	53R41SS	GENSS RIB, DAIRYSELECT	103	38.8	29.8	40.3	60.8	7.7	3.2	3.6	2.9	36.6	37.2		52.1	62.4	64.4	35.6	3.4	36167
Masters Choice	MCT5371	Agrisure GT	103	38.4	32.9	38.5	61.1	7.2	3.1	3.4	2.6	36.4	37.0		54.2	64.9	66.9	33.1	3.5	32500
NK	NK0199	Agrisure 3011A	101	37.6	32.1	37.3	60.9	7.5	3.4	3.5	2.5	38.6	39.2		52.3	62.7	64.6	35.4	3.1	34000
Dekalb	DKC52-30RIB	GENSS RIB	102	36.9	31.7	36.7	61.2	7.2	3.7	3.8	2.5	40.1	40.7		49.2	57.7	59.5	40.5	2.8	36500
Dekalb	DKC55-21RIB	GENVT2P RIB	105	36.3	30.8	35.3	61.3	7.0	3.9	3.9	2.6	42.1	42.7		47.6	56.2	57.9	42.1	2.5	33667
Channel	203-01STXRIB	GENSS RIB	103	36.2	31.8	40.6	59.3	7.1	3.1	3.9	3.0	36.8	37.4		53.8	64.4	66.4	33.6	3.5	36500
Doebler's PA Hybrids, Inc.	RPM4115AMXT	RW/HXX/YGCB/LL/RR2	101	35.7	30.7	33.9	57.9	7.2	3.7	4.1	2.4	43.5	44.2	56.4	50.1	59.7	62.0	38.0	2.6	37500
Hubner	H6257RCSS	GENSS RIB	104	35.7	32.0	38.2	60.1	7.4	3.4	4.4	2.8	38.3	38.9	53.7	51.8	60.1	62.3	37.7	3.1	34833
Hubner	H6225RCSS	GENSS RIB	102	35.4	32.5	37.2	60.6	7.0	3.7	4.0	2.6	40.2	40.8	53.4	49.2	57.0	58.7	41.3	2.8	35000
NK	NK0519	Agrisure 3122 E-Z Refuge	105	34.7	32.9	32.6	60.7	7.2	4.1	3.9	2.6	43.5	44.2		46.1	55.6	57.3	42.7	2.2	33667
Dekalb	DKC54-40RIB	GENVT2P RIB	104	34.4	35.0	35.2	53.9	7.6	3.6	3.9	2.8	41.1	41.8		50.7	60.7	62.6	37.4	2.8	37000
Seedway	SW5430GenSS	GENSS RIB	105	34.0	35.9	32.4	60.9	7.3	4.0	4.3	2.7	43.1	43.7		46.6	55.4	57.1	42.9	2.3	37167
Channel	202-20STXRIB	GENSS RIB	102	32.6	31.4	35.9	59.3	7.2	3.8	4.1	2.6	40.3	40.9		48.4	58.0	59.8	40.2	2.7	34833
Pioneer	P0242AMXT	AMXT,LL,RR2	104	32.4	30.7	34.5	61.6	7.5	3.6	4.1	2.4	40.6	41.3		49.9	58.2	60.0	40.0	2.7	33833
King Fisher	KF 52C20	Conventional	102	31.7	31.9	32.0	61.3	7.5	4.0	4.3	2.3	43.2	43.9		47.8	57.0	58.8	41.2	2.3	33000
Doebler's PA Hybrids, Inc.	RPM4318AMXT	RW/HXX/YGCB/LL/RR2	103	30.9	31.7	33.2	59.3	7.8	3.7	4.1	2.4	42.0	42.7	53.8	51.2	60.1	61.9	38.1	2.7	31833
Wolf River Valley Seeds	3805FLRR	Floury Leafy, RR	103	30.3	26.6	25.6	56.1	8.2	4.5	4.3	2.4	49.6	50.4	53.9	46.3	55.6	57.6	42.4	1.8	32000
101-105 day RM Mean				35.1	31.7	35.4	59.8	7.4	3.7	4.0	2.6	40.9	41.5	54.2	49.7	58.9	60.8	39.2	2.7	34769

Company/Brand	Hybrid	Traits	Relative Maturity	Dry Matter	Yield, 35% DM	Starch	Starch Digestibility	Crude Protein	Lignin	Ash	Total Fatty Acids	aNDFom	NDF	Wet Chem 30 hr NDFD	30 hr NDFD	120 hr NDFD	240 hr NDFD	240 hr uNDF	RFC - Fill Ratio ¹	Harvest Population
				%	tons/ac	% DM	7 hr, 4mm	% DM	% DM	% DM	% DM	% DM	% DM	% NDF	%NDF	%NDF	%NDF	%NDF		plants/ac
Masters Choice	MCT5661	Agrisure GT	106	35.4	36.2	37.1	63.8	6.6	3.4	3.3	2.5	38.7	39.3		50.3	60.2	62.1	37.9	2.9	34000
Doebler's PA Hybrids, Inc.	RPM4717AMX	HXX/YGCB/LL/RR2	107	34.1	31.7	30.3	60.4	7.0	4.1	3.7	2.4	44.7	45.3	56.3	47.9	57.0	58.8	41.2	2.2	35000
Dyna-Gro/CPS	D49VC39	GENVT2P	109	32.7	33.3	29.0	59.3	7.8	4.0	3.7	2.6	43.5	44.2		48.8	57.5	59.3	40.7	2.3	32000
Dekalb	DKC57-77RIB	DG GENVT2 RIB	107	32.7	29.6	35.5	61.9	6.5	3.6	3.8	2.6	41.1	41.8		50.8	59.7	62.0	38.0	2.8	35667
Seedway	SW6630GenSS	GENSS RIB	110	32.6	34.8	33.9	56.8	7.4	3.3	4.2	2.7	40.2	40.8		53.7	64.3	66.2	33.8	3.0	35000
Augusta Seed Corporation	4759	Agrisure Viptera 3110	109	31.8	31.7	30.9	54.6	7.9	3.7	4.4	2.5	44.3	45.0	54.2	51.5	60.8	62.7	37.3	2.5	34833
Channel	207-27STXRIB	GENSS RIB	107	31.7	31.5	33.9	58.1	6.9	3.6	4.1	2.8	41.4	42.0		50.7	60.1	61.9	38.1	2.7	35500
King Fisher	KF 58C80	Conventional	108	31.6	35.1	34.0	59.3	8.3	3.6	4.5	2.7	39.8	40.4		51.9	62.1	64.0	36.0	2.8	30833
Channel	209-15STXRIB	GENSS RIB	109	31.0	33.1	31.9	57.8	7.9	3.7	4.2	2.5	42.8	43.5		50.5	60.0	61.9	38.1	2.5	34667
Seedway	SW5559GTRW	Agrisure GT/RW	106	30.2	33.1	30.4	63.0	7.0	4.0	4.1	2.3	44.0	44.7		47.6	56.2	58.0	42.0	2.3	33667
Dairyland Seed	HiDF-3407RA	Smartstax Refuge Advanced	107	29.3	27.7	24.4	61.3	7.1	4.8	4.5	2.3	50.9	51.7	48.5	43.0	52.5	54.2	45.8	1.6	34500
Pioneer	P0921AMXT	AMXT,LL,RR2	110	28.7	33.2	30.0	61.9	8.2	4.0	4.6	2.4	42.6	43.3		48.5	57.0	58.8	41.2	2.3	35833
106 -110day RM Mean				31.8	32.6	31.8	59.9	7.4	3.8	4.1	2.5	42.8	43.5	53.0	49.6	59.0	60.8	39.2	2.5	34292
LSD (0.10)				2.9	3.5	5.4	3.3	0.6	0.5	0.6	0.3	4.8	4.9	4.6	3.5	4.4	4.6	4.6	0.7	1976
OverallMean				35.2	31.9	34.8	59.0	7.4	3.7	4.0	2.6	41.3	41.9	54.7	50.1	59.4	61.3	38.7	2.7	34779

* All nutrient parameters analyzed by NIR methods, except where indicated. Select companies opted to receive wet chemistry information for an additional fee.

** Tables are sorted by descending dry matter for comparison purposes

*** NDF = neutral detergent fiber, aNDFom = ash corrected neutral detergent fiber, NDFD = neutral detergent fiber digestibility, uNDF = undigested neutral detergent fiber

¹ - RFC-Fill Ratio = Rumen Fermentable Carbohydrate - Fill Ratio, defined as ((NDFd30 + starch)/uNDF30). Jones, L.R., and J. Siciliano-Jones. 2015. Index useful for ranking silage samples. Feedstuffs 17, 19.

² - NS = Not Significant

³ - One plot replicate had a harvest population count < 25,000

⁴ - Yield and harvest population data removed due to 2 plot replicates having a harvest population count < 25,000

Company/Brand	Hybrid	Traits	Relative Maturity	Dry Matter %	Yield, 35% DM tons/ac	Starch % DM	Starch Digestibility 7 hr, 4mm	Crude Protein % DM	Lignin % DM	Ash % DM	Total Fatty Acids % DM	aNDFom % DM	NDF % DM	Wet Chem 30 hr NDFD % NDF	30 hr NDFD % NDF	120 hr NDFD % NDF	240 hr NDFD % NDF	240 hr uNDF % NDF	RFC - Fill Ratio ¹	Harvest Population plants/ac
King Fisher	KF 49C60	Conventional	99	36.9	28.3	39.5	61.2	7.2	2.9	4.0	2.5	37.7	38.3		56.5	68.2	70.7	29.3	3.7	31180
Hubner	H6124RCSS	GENSS RIB	96	36.7	33.7	36.8	63.5	7.6	3.2	3.8	2.5	39.4	40.0	55.2	53.2	63.8	65.7	34.3	3.1	32403
Dekalb	DKC46-20RIB	GENVT3P RIB	96	35.7	30.8	39.7	64.2	7.4	3.2	3.5	2.5	37.4	38.0		52.0	61.7	63.7	36.3	3.3	30263
Dekalb	DKC48-57RIB	GENVT2P RIB	98	35.7	33.1	34.5	62.0	7.4	3.2	4.2	2.4	40.5	41.1		54.2	64.2	66.2	33.8	3.1	30416
Pioneer	P9789AMXT	AMXT,LL,RR2	98	34.5	28.2	39.3	63.1	7.4	3.2	3.9	2.7	37.5	38.1		51.6	61.1	63.0	37.0	3.2	29346
Mycogen Seeds	TMF2Q419	Smartstax Refuge Advanced	96	34.5	24.9	33.1	61.6	6.6	3.3	3.7	2.4	42.9	43.5	58.5	52.5	62.5	64.4	35.6	2.7	30568
Augusta Seed Corporation	3750	Agrisure Viptera 3111	100	34.3	30.6	36.3	60.9	7.2	3.3	4.0	2.6	39.9	40.5	53.4	52.2	60.6	62.6	37.4	3.0	30874
Augusta Seed Corporation	2847	Agrisure Viptera 3110	97	34.1	29.1	42.0	62.3	7.6	3.0	3.9	3.1	33.9	34.5	57.3	52.4	62.0	64.1	35.9	3.7	31027
Masters Choice	MCT4934	Agrisure Viptera 3111	99	33.7	30.9	33.2	62.0	6.7	3.6	4.2	2.3	41.5	42.1		48.7	58.2	60.1	39.9	2.5	30568
Masters Choice	MCT4632	Agrisure Viptera 3110	96	33.4	27.6	37.9	60.5	7.8	3.0	4.2	2.5	36.9	37.4		53.2	62.9	65.1	34.9	3.3	29804
Channel	199-72STXRIB	GENSS RIB	99	33.1	27.5	35.3	65.2	6.8	3.4	3.9	2.6	39.9	40.5		51.4	61.0	62.8	37.2	2.9	28734
Mycogen Seeds	TMF99Q47	Smartstax Refuge Advanced	99	33.0	27.7	35.9	61.6	6.9	3.2	3.4	2.7	40.1	40.8	56.0	52.6	62.0	64.1	35.9	3.0	30263
Doebler's PA Hybrids, Inc.	3916GRQ	Agrisure 3011A	99	32.8	28.8	33.6	64.3	7.1	3.4	3.6	2.2	41.6	42.2	57.1	51.2	60.7	62.6	37.4	2.7	29499
Channel	198-98STXRIB	GENSS RIB	98	32.8	25.0	33.3	64.5	7.1	3.6	4.1	2.4	40.8	41.4		49.5	58.5	60.3	39.7	2.6	30110
Hubner	H6157RCSS	GENSS RIB	94	31.6	28.4	39.8	66.4	6.6	3.0	3.4	2.6	36.9	37.4	55.8	53.4	62.4	64.4	35.6	3.5	29651
Hubner	H6191RCSS	GENSS RIB	99	31.5	25.6	36.3	62.8	7.4	3.4	3.9	2.7	39.1	39.7	54.1	50.5	59.3	61.2	38.8	2.9	31027
Growmark FS	49R79SS	GENSS RIB, DAIRYSELECT	99	30.5	25.0	32.7	63.2	8.0	3.5	4.5	2.3	41.2	41.8		51.7	60.2	62.0	38.0	2.7	30874
Mycogen	BMR97B37	Smartstax	97	29.6	26.8	32.7	63.3	7.7	2.9	3.8	2.5	39.5	40.1	61.8	59.0	70.7	72.9	27.1	3.5	31027
Mycogen	F2F499	Smartstax Refuge Advanced	99	28.3	27.2	30.2	61.9	7.2	2.7	4.1	2.4	41.6	42.2	67.6	63.4	76.0	78.3	21.7	3.7	31027
94-100 day RM Mean				33.3	28.4	35.9	62.9	7.2	3.2	3.9	2.5	39.4	40.0	57.7	53.1	63.0	65.0	35.0	3.1	30456
NK	NK0199	Agrisure 3011A	101	36.5	27.5	36.1	64.7	7.5	3.3	3.6	2.2	38.8	39.4		51.5	61.4	63.5	36.5	3.0	30626
Channel	202-20STXRIB	GENSS RIB	102	35.0	32.5	34.4	62.9	7.5	3.5	4.3	2.5	40.4	41.0		51.0	59.9	61.7	38.3	2.8	31027
Growmark FS	53R41SS	GENSS RIB, DAIRYSELECT	103	34.8	26.6	37.8	65.1	7.3	3.4	3.5	2.6	38.6	39.2		50.4	58.5	60.3	39.7	3.0	29346
Hubner	H6257RCSS	GENSS RIB	104	34.4	30.4	34.5	62.9	7.6	3.2	4.1	2.4	38.9	39.5	55.6	53.0	63.5	65.4	34.6	3.0	29651
Dekalb	DKC52-30RIB	GENSS RIB	102	34.4	25.6	37.9	65.4	6.9	3.2	3.1	2.4	38.4	39.0		52.1	60.6	62.4	37.6	3.1	31485
Doebler's PA Hybrids, Inc.	RPM4115AMXT	RW/HXX/YGCB/LL/RR2	101	33.4	29.4	35.6	62.1	6.8	3.3	3.9	2.4	40.4	41.1	57.5	52.5	61.3	63.2	36.8	3.0	30721
Dekalb	DKC55-21RIB	GENVT2P RIB	105	33.3	25.1	38.7	61.8	6.9	3.2	3.6	2.7	38.5	39.1		51.5	60.3	62.2	37.8	3.1	32097
Seedway	SW5430GenSS	GENSS RIB	105	33.0	24.8	33.1	63.3	6.6	3.6	3.7	2.6	41.4	42.0		49.8	58.6	60.5	39.5	2.6	30263
Doebler's PA Hybrids, Inc.	RPM4318AMXT	RW/HXX/YGCB/LL/RR2	103	32.9	28.9	37.6	65.0	7.2	3.1	3.8	2.4	38.2	38.8	56.1	53.0	63.5	65.4	34.6	3.2	30874
NK	NK0142	Agrisure 3122 E-Z Refuge	101	32.8	25.8	39.4	62.2	7.2	3.3	3.7	2.6	37.2	37.7		49.7	58.6	60.4	39.6	3.1	30263
NK	NK0519	Agrisure 3122 E-Z Refuge	105	32.8	24.3	35.7	64.6	6.7	3.4	3.2	2.5	39.6	40.2		51.0	61.7	63.6	36.4	2.9	31791
Dekalb	DKC54-40RIB	GENVT2P RIB	104	32.8	27.5	34.2	62.8	7.4	3.3	3.8	2.5	39.7	40.3		52.0	61.4	63.3	36.7	2.9	31485
Channel	203-01STXRIB	GENSS RIB	103	32.6	29.1	31.9	62.4	7.2	3.3	4.6	2.3	41.3	42.0		52.7	63.3	65.7	34.3	2.9	31638
King Fisher	KF 52C20	Conventional	102	32.4	28.2	37.2	64.6	7.2	3.4	3.8	2.5	38.8	39.4		49.7	58.1	60.1	39.9	2.9	31333
Masters Choice	MCT5371	Agrisure GT	103	32.2	29.8	33.2	63.9	6.9	3.3	4.2	2.3	40.6	41.3		51.7	60.8	63.0	37.0	2.8	31485
Hubner	H6225RCSS	GENSS RIB	102	31.9	25.8	36.1	64.4	6.9	3.0	3.6	2.4	39.9	40.5	57.2	56.4	67.2	69.2	30.8	3.4	32708
Wolf River Valley Seeds	3805FLRR	Floury Leafy, RR	103	31.5	28.2	32.1	63.4	7.5	3.6	3.7	2.4	41.8	42.4	55.1	49.7	60.3	62.1	37.9	2.5	30110
Pioneer	P0242AMXT	AMXT,LL,RR2	104	30.9	26.7	36.7	66.3	7.1	3.3	4.0	2.4	38.9	39.5		50.5	59.5	61.3	38.7	2.9	29651
101-105 day RM Mean				33.2	27.6	35.7	63.8	7.1	3.3	3.8	2.5	39.5	40.1	56.3	51.6	61.0	63.0	37.0	2.9	30920

Company/Brand	Hybrid	Traits	Relative Maturity	Dry Matter	Yield, 35% DM	Starch	Starch Digestibility	Crude Protein	Lignin	Ash	Total Fatty Acids	aNDFom	NDF	Wet Chem 30 hr NDFD	30 hr NDFD	120 hr NDFD	240 hr NDFD	240 hr uNDF	RFC - Fill Ratio ¹	Harvest Population
				%	tons/ac	% DM	7 hr, 4mm	% DM	% DM	% DM	% DM	% DM	% DM	% NDF	%NDF	%NDF	%NDF	%NDF		plants/ac
Masters Choice	MCT5661	Agrisure GT	106	32.9	32.9	34.9	65.6	6.9	3.4	3.5	2.4	39.8	40.4		51.0	60.4	62.6	37.4	2.8	30568
Dekalb	DKC57-77RIB	DG GENVT2 RIB	107	31.9	28.6	35.7	65.8	6.4	3.5	3.4	2.5	41.2	41.8		51.3	59.6	61.4	38.6	2.8	30110
King Fisher	KF 58C80	Conventional	108	31.9	33.3	34.8	63.4	7.6	3.1	4.2	2.4	39.1	39.8		55.2	65.7	67.8	32.2	3.2	31944
Channel	207-27STXRIB	GENSS RIB	107	31.5	32.4	35.2	62.8	7.1	3.2	4.4	2.5	39.4	40.0		53.8	63.0	65.2	34.8	3.1	30110
Doebler's PA Hybrids, Inc.	RPM4717AMX	HXX/YGCB/LL/RR2	107	31.5	29.6	36.9	65.1	7.5	3.6	3.6	2.5	39.6	40.2	53.4	49.0	56.7	58.4	41.6	2.8	30263
Augusta Seed Corporation	4759	Agrisure Viptera 3110	109	31.0	24.2	32.4	62.7	7.0	3.6	4.0	2.4	41.5	42.1	56.0	49.1	57.3	59.5	40.5	2.5	30568
Dyna-Gro/CPS	D49VC39	GENVT2P	109	30.9	31.3	30.4	62.3	7.7	3.6	4.0	2.5	43.4	44.1		51.7	60.3	62.2	37.8	2.5	29957
Seedway	SW6630GenSS	GENSS RIB	110	30.6	26.1	37.5	62.0	7.2	3.1	4.1	2.9	37.6	38.2		53.4	64.0	66.0	34.0	3.2	30263
Dairyland Seed	HiDF-3407RA	Smartstax Refuge Advanced	107	30.3	31.4	30.6	64.8	7.1	3.9	3.9	2.3	43.9	44.6	52.7	47.6	57.5	59.3	40.7	2.2	30874
Channel	209-15STXRIB	GENSS RIB	109	30.0	31.8	35.3	63.9	7.2	3.4	3.6	2.5	39.4	40.0		51.9	61.1	63.0	37.0	2.9	31333
Seedway	SW5559GTRW	Agrisure GT/RW	106	29.9	26.5	32.7	66.1	6.7	3.5	3.7	2.2	42.6	43.2		51.6	60.6	62.5	37.5	2.6	31333
Pioneer	P0921AMXT	AMXT,LL,RR2	110	29.5	30.2	30.1	64.6	7.8	3.5	4.5	2.2	41.4	42.1		51.3	61.7	63.6	36.4	2.6	30110
106 -110day RM Mean				31.0	29.8	33.9	64.1	7.2	3.4	3.9	2.4	40.7	41.4	54.0	51.4	60.7	62.6	37.4	2.8	30619
LSD (0.10)				2.4	4.0	4.6	NS ²	NS	0.4	0.6	0.3	NS	NS	4.1	3.4	4.3	4.3	4.3	0.6	NS
OverallMean				32.7	28.4	35.3	63.5	7.2	3.3	3.9	2.5	39.8	40.4	56.7	52.1	61.7	63.7	36.3	3.0	30666

* All nutrient parameters analyzed by NIR methods, except where indicated. Select companies opted to receive wet chemistry information for an additional fee.

** Tables are sorted by descending dry matter for comparison purposes

*** NDF = neutral detergent fiber, aNDFom = ash corrected neutral detergent fiber, NDFD = neutral detergent fiber digestibility, uNDF = undigested neutral detergent fiber

¹ - RFC-Fill Ratio = Rumen Fermentable Carbohydrate - Fill Ratio, defined as ((NDFd30 + starch)/uNDF30). Jones, L.R., and J. Siciliano-Jones. 2015. Index useful for ranking silage samples. Feedstuffs 17, 19.

² - NS = Not Significant

³ - One plot replicate had a harvest population count < 25,000

⁴ - Yield and harvest population data removed due to 2 plot replicates having a harvest population count < 25,000

Bt corn trait packages with their Bt proteins, spectrum of control, & % refuge

Updated 15 March 2017

TRAIT FAMILY Specific Product	Bt protein(s)	CONTROL SPECTRUM Marketed for control of:		May be locally or regionally ineffective on:	Herbicide tolerance	Refuge %
		above-ground-----in soil				
AGRISURE						
Agrisure 3010, 3010A	Cry1Ab	ECB SCB SWCB	---		GT LL	20%
Agrisure 3000GT, 3011A	Cry1Ab	ECB SCB SWCB	RW	RW	GT LL	20%
Agrisure Viptera 3110	Cry1Ab Vip3A	BCW CEW ECB FAW	---		GT LL	20%
Agrisure Viptera 3111	Cry1Ab Vip3A	BCW CEW ECB FAW	RW	RW	GT LL	20%
Agrisure	Cry1Ab Cry1F	BCW ECB FAW	---	FAW, WBC	REFER TO BAG TAG for specific letter code: EZ0 hybrids = GT only EZ1 hybrids = GT LL	5% in bag
Agrisure 3122 E-Z Refuge	Cry1Ab Cry1F mCry3A Cry34/35Ab1	BCW ECB FAW SB SCB SWCB	RW	FAW, WBC RW		5% in bag
Agrisure Viptera	Cry1Ab Cry1F Vip3A	BCW CEW ECB FAW	---			5% in bag
Agrisure Duracade 5122 E-Z Refuge	Cry1Ab Cry1F mCry3A eCry3.1Ab	BCW ECB FAW SB SWCB WBC	RW	FAW, WBC RW		5% in bag
Agrisure Duracade	Cry1Ab Cry1F Vip3A	BCW CEW ECB FAW	RW	RW		5% in bag
HERCULEX						
Herculex 1 (HX1)	Cry1F	BCW ECB FAW SB SCB SWCB	---	FAW, SWCB, WBC	LL RR2 (most)	20%
Herculex RW (HXRW)	Cry34/35Ab1	---	RW	RW		20%
Herculex XTRA (HXX)	Cry1F Cry34/35Ab1	BCW ECB FAW SB SCB SWCB WBC	RW	FAW, SWCB, WBC RW		20%
OPTIMUM						
Intrasect (YHR)	Cry1Ab Cry1F	BCW ECB FAW	---	FAW, WBC	LL RR2	5%
AcreMax (AM)	Cry1Ab Cry1F	BCW ECB FAW	---	FAW, WBC	LL RR2	5% in bag
Leptra (VYHR) ^a AcreMax Leptra (AML) ^b	Cry1Ab Cry1F Vip3A	BCW CEW ECB FAW SB SCB SWCB TAW WBC	---		LL RR2	^a 5% ½ mile ^b 5% in bag
AcreMax RW (AMRW)	Cry34/35Ab1	---	RW	RW	LL RR2	10% in bag
AcreMax1 (AM1)	Cry1F Cry34/35Ab1	BCW ECB FAW SB SCB SWCB WBC	RW	FAW, SWCB, WBC RW	LL RR2	10% in bag 20% ECB
TRIssect (CHR)	Cry1F mCry3A	BCW ECB FAW SB SCB SWCB WBC	RW	FAW, SWCB, WBC RW	LL RR2	20%
Intrasect TRIssect (CYHR) ^a AcreMax TRIssect (AMT) ^b	Cry1Ab Cry1F mCry3A	BCW ECB FAW SB SCB SWCB	RW	FAW, WBC RW	LL RR2	^a 20% ^b 10% in bag
Intrasect Xtra (YXR) ^a AcreMax Xtra (AMX) ^b	Cry1Ab Cry1F Cry34/35Ab1	BCW ECB FAW SB SCB SWCB	RW	FAW, WBC RW	LL RR2	^a 20% ^b 10% in bag
Intrasect Xtreme (CYXR) ^a AcreMax XTreme (AMXT) ^b	Cry1Ab Cry1F mCry3A Cry34/35Ab1	BCW ECB FAW SB SCB SWCB	RW	FAW, WBC RW	LL RR2	^a 5% ^b 5% in bag
YIELDGARD or GENUITY						
YieldGard CB (YGCB)	Cry1Ab	ECB SCB SWCB	---	SCB	RR2	20%
YieldGard VT Rootworm	Cry3Bb1	---	RW	RW	RR2	20%
YieldGard VT Triple	Cry1Ab Cry3Bb1	ECB SCB SWCB	RW	SCB RW	RR2	20%
Genuity VT Double PRO ^a or RIB complete ^b	Cry1A.105 Cry2Ab2	CEW ECB FAW SB SCB SWCB	---	CEW	RR2	^a 5% ^b 5% in bag
Genuity VT Triple PRO ^a or RIB complete ^b	Cry1A.105 Cry2Ab2 Cry3Bb1	CEW ECB FAW SB SCB SWCB	RW	CEW RW	RR2	^a 20% ^b 10% in bag
Genuity SmartStax ^a or RIB Complete ^b	Cry1A.105 Cry2Ab2 Cry1F Cry3Bb1 Cry34/35Ab1	BCW CEW ECB FAW SB SCB SWCB WBC	RW	CEW, WBC RW	LL RR2	^a 5% ^b 5% in bag
OTHER						
Powercore ^a Powercore Refuge Adv. ^b	Cry1A.105 Cry2Ab2 Cry1F	BCW CEW ECB FAW SB SCB SWCB WBC	---	CEW, WBC	LL RR2	^a 5% ^b 5% in bag
Smartstax ^a Smartstax Refuge Adv. ^b	Cry1A.105 Cry2Ab2 Cry1F Cry3Bb1 Cry34/35Ab1	BCW CEW ECB FAW SB SCB SWCB WBC	RW	CEW, WBC RW	LL RR2	^a 5% ^b 5% in bag
Qrome	Cry1Ab Cry1F mCry3A Cry34/35Ab1	BCW ECB FAW SB SCB SWCB	RW	FAW, WBC RW	LL RR2	5% in bag